ABSTRACT

IMAGE PROCESSING APPARATUS AND METHOD

A compression and de-compression arrangement is provided for a display device having a display memory and a display. The arrangement includes a colour processor which reduces the colour samples by processing a pair of pixels to produce first and second luminance values and forming first and second output chrominance values from the pair of pixels. The first and second output chrominance values are formed by calculating for each pixel the corresponding U and V chrominance values and forming the first and second chrominance values (U, V) from the average of the values for each pixel.

Forming the compressed representation of the colour image provides an advantage when recovering the original image, particularly for example where the image contains detail and/or text. The image processing apparatus of the system receives the group of colour component signal samples from the display memory and generates first and second output pixels, each comprising three colour component values (R, G, B), from each group. The image processing apparatus includes a detail detection processor, which detects whether either of the pixels represented by each group of signal samples represents white or black and the other does not. This may be representative of one of the pixels being part of a text character or detail. Accordingly, in order to improve the likelihood of preserving the text and detail in the reproduced image, the de-compressing processor is arranged to assign the chrominance values (U1, V1) of one of the pixels to zero. The other chrominance value (U2, V2) of the other pixel is assigned the value of twice the value of the first and second input chrominance values respectively.

[Fig 2]

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